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~~36~~. (New) A method of inducing the expression of an exogenous gene in a subject containing:

- a) a DNA construct encoding an exogenous gene product under the control of a hormone response element; wherein said response element is not normally present in the cells of said subject,
- b) DNA encoding a receptor which is not normally present in the cells of said subject, under the control of an inducible promoter; wherein said receptor, in the presence of its associated ligand and the ultraspiracle receptor, binds to said hormone response element,
- c) ultraspiracle receptor, and
- d) the associated ligand for said receptor which is not normally present in the cells of said subject,

said method comprising subjecting a subject to conditions suitable to induce expression of said receptor which is not normally in the cells of said subject.

<sup>8</sup>  
~~36~~. (New) A method according to claim ~~36~~<sup>7</sup>, wherein said ultraspiracle receptor is provided to said subject by a DNA construct encoding said ultraspiracle receptor.

<sup>9</sup>  
~~37~~. (New) A method according to claim ~~36~~<sup>8</sup>, wherein said receptors are expressed under the control of a tissue-specific promoter.

<sup>10</sup>  
~~38~~. (New) A method according to claim ~~36~~<sup>7</sup>, wherein said ultraspiracle receptor is substantially the same as that set forth in amino acids 1-513 of SEQ ID NO:2.

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~~39~~. (New) A method according to claim ~~36~~<sup>7</sup>, wherein said exogenous genes are wild type genes or therapeutic genes.

<sup>12</sup>  
~~40~~. (New) A method according to claim ~~36~~<sup>11</sup>, wherein said wild type genes encode gene products:



<sup>17</sup> 45. (New) A method according to claim <sup>14</sup>42, wherein said ultraspiracle receptor is substantially the same as that set forth in amino acids 1-513 of SEQ ID NO:2.

<sup>18</sup> 46. (New) A method according to claim <sup>14</sup>42, wherein said exogenous genes are wild type genes or therapeutic genes.

<sup>19</sup> 47. (New) A method according to claim <sup>18</sup>46, wherein said wild type genes encode gene products:

- a) the substantial absence of which leads to the occurrence of a non-normal state in said subject, or
- b) a substantial excess of which leads to the occurrence of a non-normal state in said subject.

<sup>20</sup> 48. (New) A method according to claim <sup>18</sup>46, wherein said therapeutic genes encode gene products:

- a) which are toxic to the cells in which they are expressed, or
- b) which impart a beneficial property to said subject.

49. (New) A method to distinguish the physiological effect of a first hormone receptor in a host from other hormone receptors in said host which respond to the same ligand, said method comprising:

- a) replacing the ligand binding domain of said first receptor with a ligand binding domain from an exogenous receptor to produce a chimeric receptor maintained under the control of a tissue specific promoter;

wherein said exogenous receptor and the ligand to which the exogenous receptor responds are not normally present in said host; and

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wherein said exogenous receptor, in the presence of its associated ligand, binds to a hormone response element, thereby activating said response element, and thereafter

b) monitoring the production of product(s) whose expression is controlled by said first hormone receptor when said host is exposed to ultraspiracle receptor and ligand to which said exogenous receptor responds.

50. (New) A method to render mammalian hormone receptor(s) uniquely responsive to a ligand not endogenous to host(s) in which said receptor is normally found, said method comprising:

a) replacing the ligand binding domain of said receptor with a ligand binding domain from a second receptor;

wherein said second receptor is not normally present in said host; and wherein the ligand to which the second receptor responds is not normally present in said host.

51. (New) A method according to claim 50, wherein said second receptor is ultraspiracle receptor.

52. (New) A method according to claim 50, wherein said ultraspiracle receptor has an amino acid sequence that is substantially the same as that set forth in amino acids 1-513 of SEQ ID NO:2.

53. (New) A method to determine the ligand(s) to which orphan receptor(s) responds, said method comprising:

monitoring a host cell containing a reporter construct and a hybrid receptor for expression of product(s) of said reporter construct upon contacting said cell with potential ligands for said orphan receptor and the ultraspiracle receptor;

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